



4521 State Hwy. 666, Morenci, Arizona 85540-9795 • (602) 865-4521

SFUND RECORDS CTR  
2349216

October 26, 1992

Arizona Department of Environmental Quality  
Office of Water Quality  
Water Pollution Compliance Unit  
3033 North Central Ave. (at Earll)  
Phoenix, Arizona 85012

Dear Sirs:

Re: Groundwater Quality Protection Permit No. G-0001-06  
Third Quarter 1992 Sampling Report

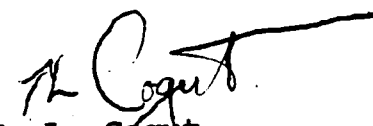
This constitutes the quarterly groundwater sampling report required by Groundwater Quality Protection Permit No. G-0001-06, as specified on page 11 of that permit. Included are Self-Monitoring Report forms, Groundwater Sampling Procedures Documentation forms and tables containing monthly sampling results, quarterly sampling results, and 5-point averages.

Monthly-required constituent analyses for July, August and September 1992 are found in Tables 1A, 1B, and 1C. Quarterly required constituent analyses for July 1992 are found in Tables 2A, 2B, and 2C.

Permit G-0001-06 specifies that compliance shall be based on 5-point running averages. Accordingly, we have enclosed 5-point monthly running averages for March 1992 through July 1992, April 1992 through August 1992, and May 1992 through September 1992. These are found in Tables 3A, 3B, and 3C. Five-point quarterly-required running averages are provided for July 1991 through July 1992. These are found in Tables 4A, 4B, and 4C. For purposes of computing averages when values were not detectable, one-half the EPA method detection limit was used for the constituent concentration. This substitution was discussed in Supplement 4 to our application for the permit.

Weekly monitoring for fluids in the leak detection system installed in the Central SX/EW raffinate and plant feed ponds continues. Please contact me if you have any questions.

Very truly yours,

  
T. L. Cogut  
Environmental Services  
Supervisor

TLC:km (F7)

Enclosures

cc: J. D. Worsham - w/encls.  
T. R. Snider - w/o encls.  
A. J. Broderick - "

10/27  
km

**SELF MONITORING REPORT FORM**  
**ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY**

Facility: PHELPS DODGE MORENCI INC - CHASE CREEK  
 Point : A00085 Name : Well CC-7  
 Latitude: 33°3'25.09" Longitude: 109°18'52.61"  
 Township: 04S Range : 29E  
 Section : 25 Quarter : BDD

Invnum: 100193  
 Permit: G-0001-06

Phelps Dodge Morenci, Inc.  
 Timothy R. Snider, Branch Manager  
 P. O. Box 187  
 Morenci, AZ. 85540

**Quarterly Reporting - Monthly Monitoring**

						PERMIT LIMIT	PERMIT LIMIT	
						Reserved SU	No Limit	
PH	SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
	07/06/92	07/22/92	00400	EPA	150.1	1186	7.0000 SU	XXXXXXXXXXXXXXXXXX
	08/03/92	08/18/92	00400	EPA	150.1	1186	7.8000 SU	XXXXXXXXXXXXXXXXXX
	09/01/92	09/11/92	00400	EPA	150.1	1186	7.2000 SU	XXXXXXXXXXXXXXXXXX
						PERMIT LIMIT	PERMIT LIMIT	
						Reserved MG/L	No Limit	
BICARBONATE	SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
	07/06/92	07/22/92	00440	EPA	305.1	1186	116.0000 MG/L	XXXXXXXXXXXXXXXXXX
	08/03/92	08/18/92	00440	EPA	305.1	1186	117.0000 MG/L	XXXXXXXXXXXXXXXXXX
	09/01/92	09/11/92	00440	EPA	305.1	1186	121.0000 MG/L	XXXXXXXXXXXXXXXXXX
						PERMIT LIMIT	PERMIT LIMIT	
						Reserved MG/L	No Limit	
TOTAL CALCIUM	SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
	07/06/92	07/22/92	00916	EPA	215.1	1186	410.0000 MG/L	XXXXXXXXXXXXXXXXXX
	08/03/92	08/18/92	00916	EPA	215.1	1186	390.0000 MG/L	XXXXXXXXXXXXXXXXXX
	09/01/92	09/11/92	00916	EPA	215.1	1186	380.0000 MG/L	XXXXXXXXXXXXXXXXXX

Note: Concentration preceded by a minus sign is detection limit and indicates none detected.

**SELF MONITORING REPORT FORM**  
**ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY**  
Quarterly Reporting - Monthly Monitoring

Facility: PHELPS DODGE MORENCI INC - CHASE CREEK  
Point : A00085 Name : Well CC-7

Invnum: 100193  
Permit: G-0001-06

						PERMIT LIMIT	PERMIT LIMIT
						Reserved MG/L	No Limit
<b>TOTAL MAGNESIUM</b>							
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
07/06/92	07/22/92	00927	EPA	242.1	1186	70.0000 MG/L	XXXXXXXXXXXXXXXXXX
08/03/92	08/18/92	00927	EPA	242.1	1186	70.0000 MG/L	XXXXXXXXXXXXXXXXXX
09/01/92	09/11/92	00927	EPA	242.1	1186	68.0000 MG/L	XXXXXXXXXXXXXXXXXX
						PERMIT LIMIT	PERMIT LIMIT
						Reserved MG/L	No Limit
<b>SODIUM</b>							
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
07/06/92	07/22/92	00929	EPA	273.1	1186	33.0000 MG/L	XXXXXXXXXXXXXXXXXX
08/03/92	08/18/92	00929	EPA	273.1	1186	34.0000 MG/L	XXXXXXXXXXXXXXXXXX
09/01/92	09/11/92	00929	EPA	273.1	1186	32.0000 MG/L	XXXXXXXXXXXXXXXXXX
						PERMIT LIMIT	PERMIT LIMIT
						Reserved MG/L	No Limit
<b>TOTAL POTASSIUM</b>							
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
07/06/92	07/22/92	00937	EPA	258.1	1186	10.3000 MG/L	XXXXXXXXXXXXXXXXXX
08/03/92	08/18/92	00937	EPA	258.1	1186	11.0000 MG/L	XXXXXXXXXXXXXXXXXX
09/01/92	09/11/92	00937	EPA	258.1	1186	10.5000 MG/L	XXXXXXXXXXXXXXXXXX
						PERMIT LIMIT	PERMIT LIMIT
						Reserved MG/L	No Limit
<b>TOTAL CHLORIDE</b>							
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
07/06/92	07/22/92	00941	EPA	325.1	1186	159.0000 MG/L	XXXXXXXXXXXXXXXXXX
08/03/92	08/18/92	00941	EPA	325.1	1186	151.0000 MG/L	XXXXXXXXXXXXXXXXXX
09/01/92	09/11/92	00941	EPA	325.1	1186	162.0000 MG/L	XXXXXXXXXXXXXXXXXX

Note: Concentration preceded by a minus sign is detection limit and indicates none detected.

**SELF MONITORING REPORT FORM**  
**ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY**  
 Quarterly Reporting - Monthly Monitoring

Facility: PHELPS DODGE MORENCI INC - CHASE CREEK  
 Point : A00085 Name : Well CC-7

Invnum: 100193  
 Permit: G-0001-06

						PERMIT LIMIT	PERMIT LIMIT
						Reserved MG/L	No Limit
<b>SULFATE</b>							
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
07/06/92	07/22/92	00945	EPA	375.3	1186	1010.0000 MG/L	XXXXXXXXXXXXXXXXXX
08/03/92	08/18/92	00945	EPA	375.3	1186	980.0000 MG/L	XXXXXXXXXXXXXXXXXX
09/01/92	09/11/92	00945	EPA	375.3	1186	950.0000 MG/L	XXXXXXXXXXXXXXXXXX
						PERMIT LIMIT	PERMIT LIMIT
						Reserved MG/L	No Limit
<b>TOTAL IRON</b>							
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
07/06/92	07/22/92	01045	EPA	236.1	1186	-0.0300 MG/L	XXXXXXXXXXXXXXXXXX
08/03/92	08/18/92	01045	EPA	236.1	1186	-0.0300 MG/L	XXXXXXXXXXXXXXXXXX
09/01/92	09/11/92	01045	EPA	236.1	1186	-0.0300 MG/L	XXXXXXXXXXXXXXXXXX
						PERMIT LIMIT	PERMIT LIMIT
						Reserved MG/L	No Limit
<b>TOTAL DISSOLVED SOLIDS</b>							
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
07/06/92	07/22/92	70295	EPA	160.1	1186	1910.0000 MG/L	XXXXXXXXXXXXXXXXXX
08/03/92	08/18/92	70295	EPA	160.1	1186	1880.0000 MG/L	XXXXXXXXXXXXXXXXXX
09/01/92	09/11/92	70295	EPA	160.1	1186	1900.0000 MG/L	XXXXXXXXXXXXXXXXXX

Note: Concentration preceded by a minus sign is detection limit and indicates none detected.

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED ON THE ATTACHED AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED INFORMATION IS TRUE ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION INCLUDING THE POSSIBILITY OF FINES AND IMPRISONMENT.

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

*James A. Smith* DATE 10/26/92

**SELF MONITORING REPORT FORM**  
**ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY**

Facility: PHELPS DODGE MORENCI INC - CHASE CREEK  
 Point : A00085 Name : Well CC-7  
 Latitude: 33°3'25.09" Longitude: 109°18'52.61"  
 Township: 04S Range : 29E  
 Section : 25 Quarter : BDD

Invnum: 100193  
 Permit: G-0001-06

Phelps Dodge Morenci, Inc.  
 Timothy R. Snider, Branch Manager  
 P. O. Box 187  
 Morenci, AZ. 85540

**Quarterly Reporting - Quarterly Monitoring**

						PERMIT LIMIT	PERMIT LIMIT
<b>TOTAL FLUORIDE</b>						1.4000 MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
07/06/92	07/22/92	00951	EPA	340.1	1186	0.5400 MG/L	XXXXXXXXXXXXXXXXXX
<b>TOTAL ARSENIC</b>						0.5000 MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
07/06/92	07/22/92	01002	EPA	206.2	1186	-0.0020 MG/L	XXXXXXXXXXXXXXXXXX
<b>TOTAL BARIUM</b>						1.0000 MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
07/06/92	07/22/92	01007	EPA	208.1	1186	-0.1000 MG/L	XXXXXXXXXXXXXXXXXX
<b>TOTAL CADMIUM</b>						0.0100 MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
07/06/92	07/22/92	01027	EPA	213.1	1186	-0.0050 MG/L	XXXXXXXXXXXXXXXXXX
<b>TOTAL CHROMIUM</b>						0.0500 MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
07/06/92	07/22/92	01029	EPA	218.1	1186	-0.0100 MG/L	XXXXXXXXXXXXXXXXXX

Note: Concentration preceded by a minus sign is detection limit and indicates none detected.

**SELF MONITORING REPORT FORM**  
**ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY**  
 Quarterly Reporting - Quarterly Monitoring

Facility: PHELPS DODGE MORENCI INC - CHASE CREEK  
 Point : A00085 Name : Well CC-7

Invnum: 100193  
 Permit: G-0001-06

<b>TOTAL COPPER</b>						PERMIT LIMIT	PERMIT LIMIT
						Reserved MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
07/06/92	07/22/92	01042	EPA 220.1	1186	-0.0100 MG/L	XXXXXXXXXXXXXXXXXX	
<b>TOTAL LEAD</b>						PERMIT LIMIT	PERMIT LIMIT
						0.0500 MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
07/06/92	07/22/92	01051	EPA 239.2	1186	-0.0020 MG/L	XXXXXXXXXXXXXXXXXX	
<b>TOTAL MANGANESE</b>						PERMIT LIMIT	PERMIT LIMIT
						Reserved MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
07/06/92	07/22/92	01055	EPA 243.1	1186	-0.0100 MG/L	XXXXXXXXXXXXXXXXXX	
<b>TOTAL SILVER</b>						PERMIT LIMIT	PERMIT LIMIT
						0.0500 MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
07/06/92	07/22/92	01077	EPA 272.1	1186	-0.0020 MG/L	XXXXXXXXXXXXXXXXXX	
<b>TOTAL SELENIUM</b>						PERMIT LIMIT	PERMIT LIMIT
						0.0100 MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
07/06/92	07/22/92	01147	EPA 270.2	1186	0.0050 MG/L	XXXXXXXXXXXXXXXXXX	
<b>TOTAL PHENOLS</b>						PERMIT LIMIT	PERMIT LIMIT
						Reserved MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
07/06/92	07/22/92	46000	EPA 420.2	1186	-0.0050 MG/L	XXXXXXXXXXXXXXXXXX	
<b>TOTAL MERCURY</b>						PERMIT LIMIT	PERMIT LIMIT
						0.0020 MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
07/06/92	07/22/92	71900	EPA 245.1	1186	0.0004 MG/L	XXXXXXXXXXXXXXXXXX	

Note: Concentration preceded by a minus sign is detection limit and indicates none detected.

**SELF MONITORING REPORT FORM**  
**ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY**  
Quarterly Reporting - Quarterly Monitoring

Facility: PHELPS DODGE MORENCI INC - CHASE CREEK  
Point : A00085 Name : Well CC-7

Invnum: 100193  
Permit: G-0001-06

						PERMIT LIMIT	PERMIT LIMIT
TOTAL ZINC						Reserved MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
07/06/92	07/22/92	82062	EPA	289.1	1186	0.0100 MG/L	XXXXXXXXXXXXXXXXXX
						PERMIT LIMIT	PERMIT LIMIT
NITRATE						10.0000 MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
07/06/92	07/22/92	00620	EPA	353.2	1186	1.7000 MG/L	XXXXXXXXXXXXXXXXXX

Note: Concentration preceded by a minus sign is detection limit and indicates none detected.

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED ON THE ATTACHED AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED INFORMATION IS TRUE ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION INCLUDING THE POSSIBILITY OF FINES AND IMPRISONMENT.

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

*Samuel R. Smith* DATE 10/26/92

**SELF MONITORING REPORT FORM**  
**ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY**

Facility: PHELPS DODGE MORENCI INC - CHASE CREEK  
 Point : A00086 Name : Well CC-8  
 Latitude: 33°3'42.10" Longitude: 109°19'19.16"  
 Township: 04S Range : 29E  
 Section : 25 Quarter : BBB

Invnum: 100193  
 Permit: G-0001-06

**Phelps Dodge Morenci, Inc.**  
 Timothy R. Snider, Branch Manager  
 P. O. Box 187  
 Morenci, AZ. 85540

**Quarterly Reporting - Monthly Monitoring**

						PERMIT LIMIT	PERMIT LIMIT
PH						Reserved SU	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
07/06/92	07/22/92	00400	EPA	150.1	1186	7.3000 SU	XXXXXXXXXXXXXXXXXX
08/03/92	08/18/92	00400	EPA	150.1	1186	7.8000 SU	XXXXXXXXXXXXXXXXXX
09/01/92	09/11/92	00400	EPA	150.1	1186	7.5000 SU	XXXXXXXXXXXXXXXXXX
						PERMIT LIMIT	PERMIT LIMIT
BICARBONATE						Reserved MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
07/06/92	07/22/92	00440	EPA	305.1	1186	110.0000 MG/L	XXXXXXXXXXXXXXXXXX
08/03/92	08/18/92	00440	EPA	305.1	1186	110.0000 MG/L	XXXXXXXXXXXXXXXXXX
09/01/92	09/11/92	00440	EPA	305.1	1186	110.0000 MG/L	XXXXXXXXXXXXXXXXXX
						PERMIT LIMIT	PERMIT LIMIT
TOTAL CALCIUM						Reserved MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
07/06/92	07/22/92	00916	EPA	215.1	1186	290.0000 MG/L	XXXXXXXXXXXXXXXXXX
08/03/92	08/18/92	00916	EPA	215.1	1186	280.0000 MG/L	XXXXXXXXXXXXXXXXXX
09/01/92	09/11/92	00916	EPA	215.1	1186	290.0000 MG/L	XXXXXXXXXXXXXXXXXX

Note: Concentration preceded by a minus sign is detection limit and indicates none detected.



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**ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY**  
 Quarterly Reporting - Monthly Monitoring

Facility: PHELPS DODGE MORENCI INC - CHASE CREEK  
 Point : A00086 Name : Well CC-8

Invnum: 100193  
 Permit: G-0001-06

						PERMIT LIMIT	PERMIT LIMIT
						Reserved MG/L	No Limit
TOTAL MAGNESIUM							
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
07/06/92	07/22/92	00927	EPA	242.1	1186	67.0000 MG/L	XXXXXXXXXXXXXXXXXX
08/03/92	08/18/92	00927	EPA	242.1	1186	65.0000 MG/L	XXXXXXXXXXXXXXXXXX
09/01/92	09/11/92	00927	EPA	242.1	1186	61.0000 MG/L	XXXXXXXXXXXXXXXXXX
						PERMIT LIMIT	PERMIT LIMIT
						Reserved MG/L	No Limit
SODIUM							
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
07/06/92	07/22/92	00929	EPA	273.1	1186	74.0000 MG/L	XXXXXXXXXXXXXXXXXX
08/03/92	08/18/92	00929	EPA	273.1	1186	79.0000 MG/L	XXXXXXXXXXXXXXXXXX
09/01/92	09/11/92	00929	EPA	273.1	1186	76.0000 MG/L	XXXXXXXXXXXXXXXXXX
						PERMIT LIMIT	PERMIT LIMIT
						Reserved MG/L	No Limit
TOTAL POTASSIUM							
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
07/06/92	07/22/92	00937	EPA	258.1	1186	8.5000 MG/L	XXXXXXXXXXXXXXXXXX
08/03/92	08/18/92	00937	EPA	258.1	1186	9.1000 MG/L	XXXXXXXXXXXXXXXXXX
09/01/92	09/11/92	00937	EPA	258.1	1186	8.8000 MG/L	XXXXXXXXXXXXXXXXXX
						PERMIT LIMIT	PERMIT LIMIT
						Reserved MG/L	No Limit
TOTAL CHLORIDE							
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
07/06/92	07/22/92	00941	EPA	325.1	1186	288.0000 MG/L	XXXXXXXXXXXXXXXXXX
08/03/92	08/18/92	00941	EPA	325.1	1186	295.0000 MG/L	XXXXXXXXXXXXXXXXXX
09/01/92	09/11/92	00941	EPA	325.1	1186	308.0000 MG/L	XXXXXXXXXXXXXXXXXX

Note: Concentration preceded by a minus sign is detection limit and indicates none detected.

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**ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY**  
 Quarterly Reporting - Monthly Monitoring

Facility: PHELPS DODGE MORENCI INC - CHASE CREEK  
 Point : A00086 Name : Well CC-8

Invnum: 100193  
 Permit: G-0001-06

						PERMIT LIMIT	PERMIT LIMIT
						Reserved MG/L	No Limit
<b>SULFATE</b>						CONCENTRATION REPORTED	LOADING REPORTED
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID			
07/06/92	07/22/92	00945	EPA	375.3	1186	615.0000 MG/L	XXXXXXXXXXXXXXXXXX
08/03/92	08/18/92	00945	EPA	375.3	1186	605.0000 MG/L	XXXXXXXXXXXXXXXXXX
09/01/92	09/11/92	00945	EPA	375.3	1186	565.0000 MG/L	XXXXXXXXXXXXXXXXXX
						PERMIT LIMIT	PERMIT LIMIT
						Reserved MG/L	No Limit
<b>TOTAL IRON</b>						CONCENTRATION REPORTED	LOADING REPORTED
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID			
07/06/92	07/22/92	01045	EPA	236.1	1186	-0.0300 MG/L	XXXXXXXXXXXXXXXXXX
08/03/92	08/18/92	01045	EPA	236.1	1186	-0.0300 MG/L	XXXXXXXXXXXXXXXXXX
09/01/92	09/11/92	01045	EPA	236.1	1186	-0.0300 MG/L	XXXXXXXXXXXXXXXXXX
						PERMIT LIMIT	PERMIT LIMIT
						Reserved MG/L	No Limit
<b>TOTAL DISSOLVED SOLIDS</b>						CONCENTRATION REPORTED	LOADING REPORTED
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID			
07/06/92	07/22/92	70295	EPA	160.1	1186	1540.0000 MG/L	XXXXXXXXXXXXXXXXXX
08/03/92	08/18/92	70295	EPA	160.1	1186	1480.0000 MG/L	XXXXXXXXXXXXXXXXXX
09/01/92	09/11/92	70295	EPA	160.1	1186	1520.0000 MG/L	XXXXXXXXXXXXXXXXXX

Note: Concentration preceded by a minus sign is detection limit and indicates none detected.

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SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

James R. Smith DATE 10/26/92

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 Township: 04S Range : 29E  
 Section : 25 Quarter : BBB

Invnum: 100193  
 Permit: G-0001-06

Phelps Dodge Morenci, Inc.  
 Timothy R. Snider, Branch Manager  
 P. O. Box 187  
 Morenci, AZ. 85540

**Quarterly Reporting - Quarterly Monitoring**

						PERMIT LIMIT	PERMIT LIMIT
<b>TOTAL FLUORIDE</b>						1.4000 MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
07/06/92	07/22/92	00951	EPA	340.1	1186	0.5800 MG/L	XXXXXXXXXXXXXXXXXX
<b>TOTAL ARSENIC</b>						0.5000 MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
07/06/92	07/22/92	01002	EPA	206.2	1186	0.0020 MG/L	XXXXXXXXXXXXXXXXXX
<b>TOTAL BARIUM</b>						1.0000 MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
07/06/92	07/22/92	01007	EPA	208.1	1186	-0.1000 MG/L	XXXXXXXXXXXXXXXXXX
<b>TOTAL CADMIUM</b>						0.0100 MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
07/06/92	07/22/92	01027	EPA	213.1	1186	-0.0050 MG/L	XXXXXXXXXXXXXXXXXX
<b>TOTAL CHROMIUM</b>						0.0500 MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
07/06/92	07/22/92	01029	EPA	218.1	1186	-0.0100 MG/L	XXXXXXXXXXXXXXXXXX

Note: Concentration preceded by a minus sign is detection limit and indicates none detected.

**SELF MONITORING REPORT FORM**  
**ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY**  
 Quarterly Reporting - Quarterly Monitoring

Facility: PHELPS DODGE MORENCI INC - CHASE CREEK  
 Point : A00086 Name : Well CC-8

Invnum: 100193  
 Permit: G-0001-06

						PERMIT LIMIT	PERMIT LIMIT
<b>TOTAL COPPER</b>						Reserved MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
07/06/92	07/22/92	01042	EPA 220.1	1186	-0.0100 MG/L	XXXXXXXXXXXXXXXXXX	
<b>TOTAL LEAD</b>						0.0500 MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
07/06/92	07/22/92	01051	EPA 239.2	1186	-0.0020 MG/L	XXXXXXXXXXXXXXXXXX	
<b>TOTAL MANGANESE</b>						Reserved MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
07/06/92	07/22/92	01055	EPA 243.1	1186	-0.0100 MG/L	XXXXXXXXXXXXXXXXXX	
<b>TOTAL SILVER</b>						0.0500 MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
07/06/92	07/22/92	01077	EPA 272.1	1186	-0.0020 MG/L	XXXXXXXXXXXXXXXXXX	
<b>TOTAL SELENIUM</b>						0.0100 MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
07/06/92	07/22/92	01147	EPA 270.2	1186	0.0030 MG/L	XXXXXXXXXXXXXXXXXX	
<b>TOTAL PHENOLS</b>						Reserved MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
08/26/92	09/14/92	46000	EPA 420.2	1186	-0.0050 MG/L	XXXXXXXXXXXXXXXXXX	
<b>TOTAL MERCURY</b>						0.0020 MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
07/06/92	07/22/92	71900	EPA 245.1	1186	0.0003 MG/L	XXXXXXXXXXXXXXXXXX	

Note: Concentration preceded by a minus sign is detection limit and indicates none detected.

SELF MONITORING REPORT FORM  
ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY  
Quarterly Reporting - Quarterly Monitoring

Facility: PHELPS DODGE MORENCI INC - CHASE CREEK  
Point : A00086 Name : Well CC-8

Invnum: 100193  
Permit: G-0001-06

TOTAL ZINC						PERMIT LIMIT	PERMIT LIMIT
						Reserved MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
07/06/92	07/22/92	82062	EPA	289.1	1186	0.0100 MG/L	XXXXXXXXXXXXXXXXXX
NITRATE						PERMIT LIMIT	PERMIT LIMIT
						10.0000 MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
07/06/92	07/22/92	00620	EPA	353.2	1186	1.4000 MG/L	XXXXXXXXXXXXXXXXXX

Note: Concentration preceded by a minus sign is detection limit and indicates none detected.

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SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

Samory R. Arida DATE 10/26/92

**SELF MONITORING REPORT FORM**  
**ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY**

Facility: PHELPS DODGE MORENCI INC - CHASE CREEK  
 Point : A00087 Name : Well CC-14  
 Latitude: 33°3'32.54" Longitude: 109°19'13.72"  
 Township: 04S Range : 29E  
 Section : 25 Quarter : BCA

Invnum: 100193  
 Permit: G-0001-06

Phelps Dodge Morenci, Inc.  
 Timothy R. Snider, Branch Manager  
 P. O. Box 187  
 Morenci, AZ. 85540

**Quarterly Reporting - Monthly Monitoring**

						PERMIT LIMIT	PERMIT LIMIT
						Reserved SU	No Limit
PH	SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED
	07/06/92	07/22/92	00400	EPA 150.1	1186	7.1000 SU	XXXXXXXXXXXXXXXXXX
	08/03/92	08/18/92	00400	EPA 150.1	1186	7.8000 SU	XXXXXXXXXXXXXXXXXX
	09/01/92	09/11/92	00400	EPA 150.1	1186	7.2000 SU	XXXXXXXXXXXXXXXXXX
						PERMIT LIMIT	PERMIT LIMIT
						Reserved MG/L	No Limit
BICARBONATE	SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED
	07/06/92	07/22/92	00440	EPA 305.1	1186	108.0000 MG/L	XXXXXXXXXXXXXXXXXX
	08/03/92	08/18/92	00440	EPA 305.1	1186	109.0000 MG/L	XXXXXXXXXXXXXXXXXX
	09/01/92	09/11/92	00440	EPA 305.1	1186	110.0000 MG/L	XXXXXXXXXXXXXXXXXX
						PERMIT LIMIT	PERMIT LIMIT
						Reserved MG/L	No Limit
TOTAL CALCIUM	SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED
	07/06/92	07/22/92	00916	EPA 215.1	1186	320.0000 MG/L	XXXXXXXXXXXXXXXXXX
	08/03/92	08/18/92	00916	EPA 215.1	1186	306.0000 MG/L	XXXXXXXXXXXXXXXXXX
	09/01/92	09/11/92	00916	EPA 215.1	1186	290.0000 MG/L	XXXXXXXXXXXXXXXXXX

Note: Concentration preceded by a minus sign is detection limit and indicates none detected.

**SELF MONITORING REPORT FORM**  
**ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY**  
 Quarterly Reporting - Monthly Monitoring

Facility: PHELPS DODGE MORENCI INC - CHASE CREEK  
 Point : A00087 Name : Well CC-14

Invnum: 100193  
 Permit: G-0001-06

						PERMIT LIMIT	PERMIT LIMIT
						Reserved MG/L	No Limit
<b>TOTAL MAGNESIUM</b>							
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
07/06/92	07/22/92	00927	EPA	242.1	1186	65.0000 MG/L	XXXXXXXXXXXXXXXXXX
08/03/92	08/18/92	00927	EPA	242.1	1186	66.0000 MG/L	XXXXXXXXXXXXXXXXXX
09/01/92	09/11/92	00927	EPA	242.1	1186	64.0000 MG/L	XXXXXXXXXXXXXXXXXX
						PERMIT LIMIT	PERMIT LIMIT
						Reserved MG/L	No Limit
<b>SODIUM</b>							
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
07/06/92	07/22/92	00929	EPA	273.1	1186	47.0000 MG/L	XXXXXXXXXXXXXXXXXX
08/03/92	08/18/92	00929	EPA	273.1	1186	41.0000 MG/L	XXXXXXXXXXXXXXXXXX
09/01/92	09/11/92	00929	EPA	273.1	1186	47.0000 MG/L	XXXXXXXXXXXXXXXXXX
						PERMIT LIMIT	PERMIT LIMIT
						Reserved MG/L	No Limit
<b>TOTAL POTASSIUM</b>							
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
07/06/92	07/22/92	00937	EPA	258.1	1186	10.0000 MG/L	XXXXXXXXXXXXXXXXXX
08/03/92	08/18/92	00937	EPA	258.1	1186	8.7000 MG/L	XXXXXXXXXXXXXXXXXX
09/01/92	09/11/92	00937	EPA	258.1	1186	10.4000 MG/L	XXXXXXXXXXXXXXXXXX
						PERMIT LIMIT	PERMIT LIMIT
						Reserved MG/L	No Limit
<b>TOTAL CHLORIDE</b>							
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
07/06/92	07/22/92	00941	EPA	325.1	1186	297.0000 MG/L	XXXXXXXXXXXXXXXXXX
08/03/92	08/18/92	00941	EPA	325.1	1186	(300.0000) MG/L	XXXXXXXXXXXXXXXXXX
09/01/92	09/11/92	00941	EPA	325.1	1186	291.0000 MG/L	XXXXXXXXXXXXXXXXXX

Note: Concentration preceded by a minus sign is detection limit and indicates none detected.

**SELF MONITORING REPORT FORM**  
**ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY**  
 Quarterly Reporting - Monthly Monitoring

Facility: PHELPS DODGE MORENCI INC - CHASE CREEK  
 Point : A00087 Name : Well CC-14

Invnum: 100193  
 Permit: G-0001-06

						PERMIT LIMIT	PERMIT LIMIT
						Reserved MG/L	No Limit
<b>SULFATE</b>							
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
07/06/92	07/22/92	00945	EPA	375.3	1186	650.0000 MG/L	XXXXXXXXXXXXXXXXXX
08/03/92	08/18/92	00945	EPA	375.3	1186	580.0000 MG/L	XXXXXXXXXXXXXXXXXX
09/01/92	09/11/92	00945	EPA	375.3	1186	585.0000 MG/L	XXXXXXXXXXXXXXXXXX
						PERMIT LIMIT	PERMIT LIMIT
						Reserved MG/L	No Limit
<b>TOTAL IRON</b>							
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
07/06/92	07/22/92	01045	EPA	236.1	1186	-0.0300 MG/L	XXXXXXXXXXXXXXXXXX
08/03/92	08/18/92	01045	EPA	236.1	1186	-0.0300 MG/L	XXXXXXXXXXXXXXXXXX
09/01/92	09/11/92	01045	EPA	236.1	1186	-0.0300 MG/L	XXXXXXXXXXXXXXXXXX
						PERMIT LIMIT	PERMIT LIMIT
						Reserved MG/L	No Limit
<b>TOTAL DISSOLVED SOLIDS</b>							
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
07/06/92	07/22/92	70295	EPA	160.1	1186	1580.0000 MG/L	XXXXXXXXXXXXXXXXXX
08/03/92	08/18/92	70295	EPA	160.1	1186	1550.0000 MG/L	XXXXXXXXXXXXXXXXXX
09/01/92	09/11/92	70295	EPA	160.1	1186	1570.0000 MG/L	XXXXXXXXXXXXXXXXXX

Note: Concentration preceded by a minus sign is detection limit and indicates none detected.

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SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

*James R. Smith* DATE 10/26/92



**SELF MONITORING REPORT FORM**  
**ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY**

Facility: PHELPS DODGE MORENCI INC - CHASE CREEK  
 Point : A00087 Name : Well CC-14  
 Latitude: 33°3'32.54" Longitude: 109°19'13.72"  
 Township: 04S Range : 29E  
 Section : 25 Quarter : BCA

Invnum: 100193  
 Permit: G-0001-06

Phelps Dodge Morenci, Inc.  
 Timothy R. Snider, Branch Manager  
 P. O. Box 187  
 Morenci, AZ. 85540

**Quarterly Reporting - Quarterly Monitoring**

						PERMIT LIMIT	PERMIT LIMIT
<b>TOTAL FLUORIDE</b>						1.4000 MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
07/06/92	07/22/92	00951	EPA	340.1	1186	0.7600 MG/L	XXXXXXXXXXXXXXXXXX
<b>TOTAL ARSENIC</b>						0.5000 MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
07/06/92	07/22/92	01002	EPA	206.2	1186	-0.0020 MG/L	XXXXXXXXXXXXXXXXXX
<b>TOTAL BARIUM</b>						1.0000 MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
07/06/92	07/22/92	01007	EPA	208.1	1186	-0.1000 MG/L	XXXXXXXXXXXXXXXXXX
<b>TOTAL CADMIUM</b>						0.0100 MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
07/06/92	07/22/92	01027	EPA	213.1	1186	-0.0050 MG/L	XXXXXXXXXXXXXXXXXX
<b>TOTAL CHROMIUM</b>						0.0500 MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
07/06/92	07/22/92	01029	EPA	218.1	1186	-0.0100 MG/L	XXXXXXXXXXXXXXXXXX

Note: Concentration preceded by a minus sign is detection limit and indicates none detected.

**SELF MONITORING REPORT FORM**  
**ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY**  
 Quarterly Reporting - Quarterly Monitoring

Facility: PHELPS DODGE MORENCI INC - CHASE CREEK  
 Point : A00087 Name : Well CC-14

Invnum: 100193  
 Permit: G-0001-06

						PERMIT LIMIT	PERMIT LIMIT
<b>TOTAL COPPER</b>						Reserved MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
07/06/92	07/22/92	01042	EPA 220.1	1186	-0.0100 MG/L	XXXXXXXXXXXXXXXXXX	
						PERMIT LIMIT	PERMIT LIMIT
<b>TOTAL LEAD</b>						0.0500 MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
07/06/92	07/22/92	01051	EPA 239.2	1186	-0.0020 MG/L	XXXXXXXXXXXXXXXXXX	
						PERMIT LIMIT	PERMIT LIMIT
<b>TOTAL MANGANESE</b>						Reserved MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
07/06/92	07/22/92	01055	EPA 243.1	1186	-0.0100 MG/L	XXXXXXXXXXXXXXXXXX	
						PERMIT LIMIT	PERMIT LIMIT
<b>TOTAL SILVER</b>						0.0500 MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
07/06/92	07/22/92	01077	EPA 272.1	1186	-0.0020 MG/L	XXXXXXXXXXXXXXXXXX	
						PERMIT LIMIT	PERMIT LIMIT
<b>TOTAL SELENIUM</b>						0.0100 MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
07/06/92	07/22/92	01147	EPA 270.2	1186	0.0030 MG/L	XXXXXXXXXXXXXXXXXX	
						PERMIT LIMIT	PERMIT LIMIT
<b>TOTAL PHENOLS</b>						Reserved MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
08/26/92	09/14/92	46000	EPA 420.2	1186	-0.0050 MG/L	XXXXXXXXXXXXXXXXXX	
						PERMIT LIMIT	PERMIT LIMIT
<b>TOTAL MERCURY</b>						0.0020 MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
07/06/92	07/22/92	71900	EPA 245.1	1186	0.0005 MG/L	XXXXXXXXXXXXXXXXXX	

Note: Concentration preceded by a minus sign is detection limit and indicates none detected.

**SELF MONITORING REPORT FORM**  
**ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY**  
Quarterly Reporting - Quarterly Monitoring

Facility: PHELPS DODGE MORENCI INC - CHASE CREEK  
Point : A00087 Name : Well CC-14

Invnum: 100193  
Permit: G-0001-06

						PERMIT LIMIT	PERMIT LIMIT
						Reserved MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
07/06/92	07/22/92	82062	EPA	289.1	1186	0.0200 MG/L	XXXXXXXXXXXXXXXXXX
						PERMIT LIMIT	PERMIT LIMIT
						10.0000 MG/L	No Limit
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
07/06/92	07/22/92	00620	EPA	353.2	1186	1.6000 MG/L	XXXXXXXXXXXXXXXXXX

Note: Concentration preceded by a minus sign is detection limit and indicates none detected.

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SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

*James R. Smith*

DATE

*10/26/92*

TABLE 1A

CHASE CREEK MONITOR WELL  
Monthly Analytical Results (mg/l)

Well No.    CC-7

<u>Element</u>	<u>07-06-92</u>	<u>08-03-92</u>	<u>09-01-92</u>
Calcium	410.00	390.00	380.00
Chloride	159.00	151.00	162.00
Iron	0.015	0.015	0.015
Magnesium	70.00	70.00	68.00
pH	7.00	7.80	7.20
Sodium	33.00	34.00	32.00
Sulfate	1010.0	980.0	950.0
TDS	1910	1880	1900
Potassium	10.30	11.00	10.50
Bicarbonate	116.00	117.00	121.00

TABLE 1B

CHASE CREEK MONITOR WELL  
Monthly Analytical Results (mg/l)

Well No. CC-8

<u>Element</u>	<u>07-06-92</u>	<u>08-03-92</u>	<u>09-01-92</u>
Calcium	290.00	280.00	290.00
Chloride	288.00	295.00	308.00
Iron	0.015	0.015	0.015
Magnesium	67.00	65.00	61.00
pH	7.30	7.80	7.50
Sodium	74.00	79.00	76.00
Sulfate	615.0	605.0	565.0
TDS	1540	1480	1520
Potassium	8.50	9.10	8.80
Bicarbonate	110.00	110.00	110.00

TABLE 1C

CHASE CREEK MONITOR WELL  
Monthly Analytical Results (mg/l)

Well No. CC-14

<u>Element</u>	<u>07-06-92</u>	<u>08-03-92</u>	<u>09-01-92</u>
Calcium	320.00	306.00	290.00
Chloride	297.00	300.00	291.00
Iron	0.015	0.015	0.015
Magnesium	65.00	66.00	64.00
pH	7.10	7.80	7.20
Sodium	47.00	41.00	47.00
Sulfate	650.0	580.0	585.0
TDS	1580	1550	1570
Potassium	10.00	8.70	10.40
Bicarbonate	108.00	109.00	110.00

TABLE 2A

CHASE CREEK MONITOR WELL  
Quarterly Analytical Results (mg/l)

Well No. CC-7

<u>Element</u>	<u>07-06-92</u>
Arsenic	.0005
Barium	0.050
Cadmium	.0025
Chromium	.025
Lead	.0005
Mercury	.0004
Nitrate (N)	1.70
Selenium	.005
Silver	.0050
Fluoride	00.54
Phenols	.0010
Copper	00.01
Manganese	0.005
Zinc	00.0100

TABLE 2B

CHASE CREEK MONITOR WELL  
Quarterly Analytical Results (mg/l)

Well No. CC-8

<u>Element</u>	<u>07-06-92</u>
Arsenic	.0020
Barium	0.050
Cadmium	.0025
Chromium	.025
Lead	.0005
Mercury	.0003
Nitrate (N)	1.40
Selenium	.003
Silver	.0050
Fluoride	00.58
Phenols	.0010 *
Copper	00.01
Manganese	0.005
Zinc	00.0100

\*Value shown is for resample taken on 8/26/92. Phenols assay for 7/06/92 sample was incorrect due to analytical error.



TABLE 2C

CHASE CREEK MONITOR WELL  
Quarterly Analytical Results (mg/l)

Well No. CC-14

<u>Element</u>	<u>07-06-92</u>
Arsenic	.0005
Barium	0.050
Cadmium	.0025
Chromium	.025
Lead	.0005
Mercury	.0005
Nitrate (N)	1.60
Selenium	.003
Silver	.0050
Fluoride	00.76
Phenols	.0010 *
Copper	00.01
Manganese	0.005
Zinc	00.0200

\*Value shown is for resample taken on 8/26/92. Phenols assay for 7/06/92 sample was incorrect due to analytical error.

**TABLE 3A**

**CHASE CREEK MONITOR WELL  
Five Point Monthly Average (mg/l)**

<b>Element</b>	<b>M,A,M,J,J, 92</b>	<b>Well No. CC-7</b>	<b>M,J,J,A,S, 92</b>
		<b>A,M,J,J,A, 92</b>	
Calcium	394.20	397.80	395.80
Chloride	155.40	156.20	158.20
Iron	.015	.015	.015
Magnesium	72.400	72.800	70.800
pH	7.08	7.22	7.24
Sodium	32.600	34.200	33.200
Sulfate	1000.0	1005.0	995.0
TDS	1889	1865	1873
Potassium	10.40	10.62	10.74
Bicarbonate	117.80	116.80	117.80

TABLE 3B

CHASE CREEK MONITOR WELL  
Five Point Monthly Average (mg/l)

<u>Element</u>	<u>M,A,M,J,J, 92</u>	<u>Well No.</u>	<u>CC-8</u>
		<u>A,M,J,J,A, 92</u>	<u>M,J,J,A,S, 92</u>
Calcium	311.80	301.20	295.00
Chloride	236.00	259.00	280.80
Iron	.015	.015	.015
Magnesium	75.200	72.200	67.600
pH	7.40	7.46	7.48
Sodium	71.600	74.400	74.800
Sulfate	781.0	716.0	649.0
TDS	1625	1569	1531
Potassium	8.82	8.82	8.86
Bicarbonate	110.00	110.00	110.20

TABLE 3C

CHASE CREEK MONITOR WELL  
Five Point Monthly Average (mg/l)

<u>Element</u>	<u>M,A,M,J,J, 92</u>	<u>Well No. CC-14</u>	
		<u>A,M,J,J,A, 92</u>	<u>M,J,J,A,S, 92</u>
Calcium	307.80	307.00	305.00
Chloride	290.60	297.20	297.60
Iron	.021	.018	.018
Magnesium	65.600	67.200	66.400
pH	7.28	7.38	7.32
Sodium	44.600	45.800	45.800
Sulfate	604.0	601.0	598.0
TDS	1502	1520	1540
Potassium	10.30	10.18	10.14
Bicarbonate	108.80	109.00	108.80

TABLE 4A

CHASE CREEK MONITOR WELL  
Five Point Quarterly Average (mg/l)

<u>Element</u>	<u>J, O, J, A, J, 92</u>	<u>Well No. CC-7</u>
Arsenic	.0005	
Barium	.050	
Cadmium	.0025	
Chromium	.025	
Lead	.0005	
Mercury	.0002	
Nitrate (N)	1.74	
Selenium	.004	
Silver	.0050	
Fluoride	.56	
Phenols	.0046	
Copper	.01	
Manganese	.005	
Zinc	.0620	

TABLE 4B

CHASE CREEK MONITOR WELL  
Five Point Quarterly Average (mg/l)

<u>Element</u>	<u>J, O, J, A, J, 92</u>	<u>Well No. CC-8</u>
Arsenic	.0014	
Barium	.050	
Cadmium	.0025	
Chromium	.025	
Lead	.0005	
Mercury	.0001	
Nitrate (N)	1.48	
Selenium	.003	
Silver	.0050	
Fluoride	.56	
Phenols	.0022*	
Copper	.01	
Manganese	.005	
Zinc	.0659	

\*See comment on Table 2B.

TABLE 4C

CHASE CREEK MONITOR WELL  
Five Point Quarterly Average (mg/l)

<u>Element</u>	<u>J, O, J, A, J, 92</u>	<u>Well No. CC-14</u>
Arsenic	.0005	
Barium	.050	
Cadmium	.0025	
Chromium	.025	
Lead	.0005	
Mercury	.0002	
Nitrate (N)	1.58	
Selenium	.002	
Silver	.0050	
Fluoride	.76	
Phenols	.0030 *	
Copper	.02	
Manganese	.008	
Zinc	.1146	

\*See comment on Table 2C.

# SELF MONITORING REPORT FORM

## ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

Facility: PHELPS DODGE MORENCI INC - CHASE CREEK  
 Point : A00084 Name : LEAK DETECT  
 Latitude: 33°3'40 .35" Longitude: 109°19'51 .51"  
 Township: 04S Range : 29E  
 Section : 25 Quarter : BDD

PLANT FEED POND

Invnum: 100193  
 Permit: G-0001-06

Phelps Dodge Morenci, Inc.  
 Timothy R. Snider, Manager  
 4521 U.S. Highway 191  
 Morenci, AZ 85540

### Quarterly Reporting - Weekly Monitoring

SPECIFIC CONDUCTANCE				PERMIT LIMIT		PERMIT LIMIT	
				10000.0000		No Limit	
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
/ /	/ /	+	Field	---	micromhos	XXXXXXXXXXXXXXXXXX	
/ /	/ /	+	Field	---	micromhos	XXXXXXXXXXXXXXXXXX	
/ /	/ /	+	Field	---	micromhos	XXXXXXXXXXXXXXXXXX	
/ /	/ /	+	Field	---	micromhos	XXXXXXXXXXXXXXXXXX	
/ /	/ /	+	Field	---	micromhos	XXXXXXXXXXXXXXXXXX	
/ /	/ /	+	Field	---	micromhos	XXXXXXXXXXXXXXXXXX	
/ /	/ /	+	Field	---	micromhos	XXXXXXXXXXXXXXXXXX	
/ /	/ /	+	Field	---	micromhos	XXXXXXXXXXXXXXXXXX	
/ /	/ /	+	Field	---	micromhos	XXXXXXXXXXXXXXXXXX	
/ /	/ /	+	Field	---	micromhos	XXXXXXXXXXXXXXXXXX	
/ /	/ /	+	Field	---	micromhos	XXXXXXXXXXXXXXXXXX	

Note: Permit G-0001-06 requires sampling when there are flows of 1 ml/sec.

There were no flows that equaled or exceeded 1 ml/sec.



**SELF MONITORING REPORT FORM**  
**ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY**  
**Quarterly Reporting - Weekly Monitoring**

Facility: PHELPS DODGE MORENCI INC - CHASE CREEK  
Point : A00084 Name : LEAK DETECT

Invnum: 100193  
Permit: G-0001-06

[illegible]

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED ON THE ATTACHED AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED INFORMATION IS TRUE ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION INCLUDING THE POSSIBILITY OF FINES AND IMPRISONMENT.

SIGNATURE OF PRINCIPLE EXECUTIVE OFFICER OR AUTHORIZED AGENT

Sumo J. Arid

DATE 10/26/96

# SELF MONITORING REPORT FORM

## ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

Facility: PHELPS DODGE MORENCI INC - CHASE CREEK  
 Point : A00084 Name : LEAK DETECT  
 Latitude: 33°3'48 .66" Longitude: 109°19'51 .08"  
 Township: 04S Range : 29E  
 Section : 25 Quarter : BDD

RAFFINATE POND

Invnum: 100193  
 Permit: G-0001-06

Phelps Dodge Morenci, Inc.  
 Timothy R. Snider, Manager  
 4521 U.S. Highway 191  
 Morenci, AZ 85540

### Quarterly Reporting - Weekly Monitoring

SPECIFIC CONDUCTANCE				PERMIT LIMIT		PERMIT LIMIT	
				10000.0000		No Limit	
SAMPLE DATE	ANALYSIS DATE	STORET	METHOD	LAB ID	CONCENTRATION REPORTED	LOADING REPORTED	
/ /	/ /	+	Field	---	micromhos	XXXXXXXXXXXXXXXXXX	
/ /	/ /	+	Field	---	micromhos	XXXXXXXXXXXXXXXXXX	
/ /	/ /	+	Field	---	micromhos	XXXXXXXXXXXXXXXXXX	
/ /	/ /	+	Field	---	micromhos	XXXXXXXXXXXXXXXXXX	
/ /	/ /	+	Field	---	micromhos	XXXXXXXXXXXXXXXXXX	
/ /	/ /	+	Field	---	micromhos	XXXXXXXXXXXXXXXXXX	
/ /	/ /	+	Field	---	micromhos	XXXXXXXXXXXXXXXXXX	
/ /	/ /	+	Field	---	micromhos	XXXXXXXXXXXXXXXXXX	
/ /	/ /	+	Field	---	micromhos	XXXXXXXXXXXXXXXXXX	
/ /	/ /	+	Field	---	micromhos	XXXXXXXXXXXXXXXXXX	
/ /	/ /	+	Field	---	micromhos	XXXXXXXXXXXXXXXXXX	
/ /	/ /	+	Field	---	micromhos	XXXXXXXXXXXXXXXXXX	

Note: Permit G-0001-06 requires sampling when there are flows of 1 ml/sec.

There were no flows that equaled or exceeded 1 ml/sec.

**SELF MONITORING REPORT FORM**  
**ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY**  
**Quarterly Reporting - Weekly Monitoring**

Facility: PHELPS DODGE MORENCI INC - CHASE CREEK  
Point : A00084 Name : LEAK DETECT

Invnum: 100193  
Permit: G-0001-06

[illegible]

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED ON THE ATTACHED AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION I BELIEVE THE SUBMITTED INFORMATION IS TRUE ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION INCLUDING THE POSSIBILITY OF FINES AND IMPRISONMENT.

SIGNATURE OF PRINCIPLE EXECUTIVE OFFICER OR AUTHORIZED AGENT

*James R. Frisch*

DATE 10/26/92

**GROUNDWATER SAMPLING PROCEDURES DOCUMENTATION FORM**  
(for inclusion with the Self-Monitoring Report Form)

A. WELL IDENTIFIER (name, location, or number) CC-7 Date 7-6-92 Sampled: 7-6-92

B. FIELD MEASUREMENTS

Depth to Water (prior to purging): 117.74 (feet below land surface)

Land Elevation at Well (feet above sea level): 3561.61 (M.P.)

Equipment Used to Measure Water Level: 500' Steel Chain (Wetted Tape Method)

Water Temp. (°C): 22.2 pH (std. units): 6.64 Other: \_\_\_\_\_

Electrical Conductivity (umhos/cm @ 25°C): 2,010

C. SAMPLING METHODS

Well Purging Performed: Yes: X No: \_\_\_\_\_

Purging Equipment: Dedicated Pump

Purge Time (hrs.-min.): 19 min. Pumping Rate (gpm) 12

Sample Collection Equipment: \_\_\_\_\_ Well Volumes Removed: 3

\_\_\_\_\_ Bailer (type): \_\_\_\_\_

X Pump (type): Submersible Dedicated? Yes

\_\_\_\_\_ Other (type): \_\_\_\_\_

If a Pump was Used, at What Depth Below the Water Surface was the Pump Intake Set?: 120 Feet

Sample Collection Point (well head, water tank, etc.): Well Head

D. EQUIPMENT DECONTAMINATION

Briefly Describe Equipment Decontamination Procedures:

Water Level Measurement Equipment: Wiping with Disposable Towel

Purging Equipment: Dedicated Pump

Sample Collection Equipment: Equipment Cleaned with Purge Water

E. CONTAINERIZATION AND PRESERVATION

WATER QUALITY PARAMETER	PRESERVATION METHOD	CONTAINER TYPE/SIZE
	(All Stored at 4°C)	
General Mineral/Physical	No Additives	1,000 ML Plastic
Total Metals	HNO3 to <2 pH*	500 ML Plastic
Nitrate/Nitrite	H2SO4 to <2 pH*	50 ML Plastic
Phenols	H3PO4 + CuSO4 Solution*	100 ML Glass

Field Filtering: Yes (Yes, No, N/A)

Filtering Apparatus: Pressure Disposable Filters

Filter Mesh Size: 0.45 Micron

Chain-of-Custody Procedures Followed: Yes X No \_\_\_\_\_

\*All bottles furnished by BC Laboratories Inc. with preservative added.

**GROUNDWATER SAMPLING PROCEDURES DOCUMENTATION FORM**  
(for inclusion with the Self-Monitoring Report Form)

A. WELL IDENTIFIER (name, location, or number) CC-8 Date Sampled: 7-6-92

B. FIELD MEASUREMENTS

Depth to Water (prior to purging): 155.33 (feet below land surface)  
Land Elevation at Well (feet above sea level): 3621.52 (M.P.)  
Equipment Used to Measure Water Level: 500' Steel Chain (Wetted Tape Method)  
Water Temp. (°C): 26.7 pH (std. units): 6.70 Other: \_\_\_\_\_  
Electrical Conductivity (umhos/cm @ 25°C): 1,860

C. SAMPLING METHODS

Well Purging Performed: Yes: X No: \_\_\_\_\_  
Purging Equipment: Dedicated Pump  
Purge Time (hrs.-min.): 28 min Pumping Rate (gpm) 10  
Sample Collection Equipment: \_\_\_\_\_ Well Volumes Removed: 3  
    Bailer (type): \_\_\_\_\_  
    X Pump (type): Submersible Dedicated? Yes  
    Other (type): \_\_\_\_\_  
If a Pump was Used, at What Depth Below the Water Surface was the Pump Intake Set?: 143 Feet  
Sample Collection Point (well head, water tank, etc.): Well Head

D. EQUIPMENT DECONTAMINATION

Briefly Describe Equipment Decontamination Procedures:  
Water Level Measurement Equipment: Wiping with Disposable Towel  
Purging Equipment: Dedicated Pump Placed on PVC Pump Column  
Sample Collection Equipment: Equipment Cleaned with Purge Water

E. CONTAINERIZATION AND PRESERVATION

<u>WATER</u> <u>QUALITY PARAMETER</u>	<u>PRESERVATION</u> <u>METHOD</u>	<u>CONTAINER</u> <u>TYPE/SIZE</u>
<u>General Mineral/Physical</u>	<u>(All Stored at 4°C)</u>	<u>1,000 ML Plastic</u>
<u>Total Metals</u>	<u>No Additives</u>	<u>500 ML Plastic</u>
<u>Nitrate/Nitrite</u>	<u>HNO3 to &lt;2 pH*</u>	<u>50 ML Plastic</u>
<u>Phenols</u>	<u>H2SO4 to &lt;2 pH*</u>	<u>100 ML Glass</u>
	<u>H3PO4 + CuSO4 Solution*</u>	

Field Filtering: Yes (Yes, No, N/A)  
Filtering Apparatus: Pressure Disposable Filters  
Filter Mesh Size: 0.45 Micron  
Chain-of-Custody Procedures Followed: Yes X No \_\_\_\_\_

\*All bottles furnished by BC Laboratories Inc. with preservative added.

**GROUNDWATER SAMPLING PROCEDURES DOCUMENTATION FORM**  
(for inclusion with the Self-Monitoring Report Form)

Date

A. WELL IDENTIFIER (name, location, or number) CC-14 Sampled: 7-6-92

B. FIELD MEASUREMENTS

Depth to Water (prior to purging): 143.15 (feet below land surface)  
Land Elevation at Well (feet above sea level): 3608.39 (M.P.)  
Equipment Used to Measure Water Level: 500' Steel Chain (Wetted Tape Method)  
Water Temp. (°C): 23.8 pH (std. units): 6.95 Other: \_\_\_\_\_  
Electrical Conductivity (umhos/cm @ 25°C): 1,850

C. SAMPLING METHODS

Well Purging Performed: Yes: X No: \_\_\_\_\_  
Purging Equipment: Dedicated Pump  
Purge Time (hrs.-min.): 20 min Pumping Rate (gpm) 10  
Sample Collection Equipment: \_\_\_\_\_ Well Volumes Removed: 3  
    Bailer (type): \_\_\_\_\_  
    X Pump (type): Submersible Dedicated? Yes  
    Other (type): \_\_\_\_\_  
If a Pump was Used, at What Depth Below the Water Surface was the Pump Intake Set?: 143 Feet  
Sample Collection Point (well head, water tank, etc.): Well Head

D. EQUIPMENT DECONTAMINATION

Briefly Describe Equipment Decontamination Procedures:  
Water Level Measurement Equipment: Wiping with Disposable Towel  
Purging Equipment: Dedicated Pump on PV Column  
Sample Collection Equipment: Equipment Cleaned with Purge Water from Well

E. CONTAINERIZATION AND PRESERVATION

WATER QUALITY PARAMETER	PRESERVATION METHOD	CONTAINER TYPE/SIZE
General Mineral/Physical	(All Stored at 4°C)	1,000 ML Plastic
Total Metals	No Additives	500 ML Plastic
Nitrate/Nitrite	HNO3 to <2 pH*	50 ML Plastic
Phenols	H2SO4 to <2 pH*	100 ML Glass
	H3PO4 + CuSO4 Solution*	

Field Filtering: Yes (Yes, No, N/A)  
Filtering Apparatus: Pressure Disposable Filters  
Filter Mesh Size: 0.45 Micron  
Chain-of-Custody Procedures Followed: Yes X No \_\_\_\_\_

\*All bottles furnished by BC Laboratories Inc. with preservative added.



**GROUNDWATER SAMPLING PROCEDURES DOCUMENTATION FORM**  
(for inclusion with the Self-Monitoring Report Form)

A. WELL IDENTIFIER (name, location, or number) CC-7 Date 8-3-92 Sampled: 8-3-92

B. FIELD MEASUREMENTS

Depth to Water (prior to purging): 118.54 (feet below land surface)  
Land Elevation at Well (feet above sea level): 3561.61 (M.P.)  
Equipment Used to Measure Water Level: 500' Steel Chain (Wetted Tape Method)  
Water Temp. (°C): 22.2 pH (std. units): 6.89 Other: \_\_\_\_\_  
Electrical Conductivity (umhos/cm @ 25°C): 1,950

C. SAMPLING METHODS

Well Purging Performed: Yes: X No: \_\_\_\_\_  
Purging Equipment: Dedicated Pump  
Purge Time (hrs.-min.): 2 / min Pumping Rate (gpm) 12  
Sample Collection Equipment: \_\_\_\_\_ Well Volumes Removed: 3  
\_\_\_\_\_ Bailer (type): \_\_\_\_\_  
X Pump (type): Submersible Dedicated? Yes  
\_\_\_\_\_ Other (type): \_\_\_\_\_  
If a Pump was Used, at What Depth Below the Water Surface was the Pump Intake Set?: 120 Feet  
Sample Collection Point (well head, water tank, etc.): Well Head

D. EQUIPMENT DECONTAMINATION

Briefly Describe Equipment Decontamination Procedures:  
Water Level Measurement Equipment: Wiping with Disposable Towel  
Purging Equipment: Dedicated Pump  
Sample Collection Equipment: Equipment Cleaned with Purge Water

E. CONTAINERIZATION AND PRESERVATION

WATER QUALITY PARAMETER	PRESERVATION METHOD	CONTAINER TYPE/SIZE
	(All Stored at 4°C)	
General Mineral/Physical	No Additives	1,000 ML Plastic
Total Metals	HNO3 to <2 pH*	500 ML Plastic
Nitrate/Nitrite	H2SO4 to <2 pH*	50 ML Plastic
Phenols	H3PO4 + CuSO4 Solution*	100 ML Glass

Field Filtering: Yes (Yes, No, N/A)  
Filtering Apparatus: Pressure Disposable Filters  
Filter Mesh Size: 0.45 Micron  
Chain-of-Custody Procedures Followed: Yes X No \_\_\_\_\_

\*All bottles furnished by BC Laboratories Inc. with preservative added.

**GROUNDWATER SAMPLING PROCEDURES DOCUMENTATION FORM**  
(for inclusion with the Self-Monitoring Report Form)

A. WELL IDENTIFIER (name, location, or number) CC-8 Date 8-3-92 Sampled: 8-3-92

B. FIELD MEASUREMENTS

Depth to Water (prior to purging): 156.24 (feet below land surface)  
Land Elevation at Well (feet above sea level): 3621.52 (M.P.)  
Equipment Used to Measure Water Level: 500' Steel Chain (Wetted Tape Method)  
Water Temp. (°C): 26.8 pH (std. units): 7.14 Other: \_\_\_\_\_  
Electrical Conductivity (umhos/cm @ 25°C): 1,840

C. SAMPLING METHODS

Well Purging Performed: Yes: X No: \_\_\_\_\_  
Purging Equipment: Dedicated Pump  
Purge Time (hrs.-min.): 32 min. Pumping Rate (gpm) 10  
Sample Collection Equipment: \_\_\_\_\_ Well Volumes Removed: 3  
\_\_\_\_\_ Bailer (type): \_\_\_\_\_  
X Pump (type): Submersible Dedicated? Yes  
\_\_\_\_\_ Other (type): \_\_\_\_\_  
If a Pump was Used, at What Depth Below the Water Surface was the Pump Intake Set?: 143 Feet  
Sample Collection Point (well head, water tank, etc.): Well Head

D. EQUIPMENT DECONTAMINATION

Briefly Describe Equipment Decontamination Procedures:  
Water Level Measurement Equipment: Wiping with Disposable Towel  
Purging Equipment: Dedicated Pump Placed on PVC Pump Column  
Sample Collection Equipment: Equipment Cleaned with Purge Water

E. CONTAINERIZATION AND PRESERVATION

WATER QUALITY PARAMETER	PRESERVATION METHOD	CONTAINER TYPE/SIZE
General Mineral/Physical	(All Stored at 4°C)	1,000 ML Plastic
Total Metals	No Additives	500 ML Plastic
Nitrate/Nitrite	HNO3 to <2 pH*	50 ML Plastic
Phenols	H2SO4 to <2 pH*	100 ML Glass
	H3PO4 + CuSO4 Solution*	

Field Filtering: Yes (Yes, No, N/A)  
Filtering Apparatus: Pressure Disposable Filters  
Filter Mesh Size: 0.45 Micron  
Chain-of-Custody Procedures Followed: Yes X No \_\_\_\_\_

\*All bottles furnished by BC Laboratories Inc. with preservative added.

**GROUNDWATER SAMPLING PROCEDURES DOCUMENTATION FORM**  
(for inclusion with the Self-Monitoring Report Form)

Date \_\_\_\_\_

A. WELL IDENTIFIER (name, location, or number) CC-14 Sampled: 8-3-92

B. FIELD MEASUREMENTS

Depth to Water (prior to purging): 144.02 (feet below land surface)  
Land Elevation at Well (feet above sea level): 3608.39 (M.P.)  
Equipment Used to Measure Water Level: 500' Steel Chain (Wetted Tape Method)  
Water Temp. (°C): 23.9 pH (std. units): 6.94 Other: \_\_\_\_\_  
Electrical Conductivity (umhos/cm @ 25°C): 1840

C. SAMPLING METHODS

Well Purging Performed: Yes: X No: \_\_\_\_\_  
Purging Equipment: Dedicated Pump  
Purge Time (hrs.-min.): 21 min. Pumping Rate (gpm) 10  
Sample Collection Equipment: \_\_\_\_\_ Well Volumes Removed: 3  
    Bailer (type): \_\_\_\_\_  
    X Pump (type): Submersible Dedicated? Yes  
    Other (type): \_\_\_\_\_  
If a Pump was Used, at What Depth Below the Water Surface was the  
Pump Intake Set?: 143 Feet  
Sample Collection Point (well head, water tank, etc.): Well Head

D. EQUIPMENT DECONTAMINATION

Briefly Describe Equipment Decontamination Procedures:  
Water Level Measurement Equipment: Wiping with Disposable Towel  
Purging Equipment: Dedicated Pump on PV Column  
Sample Collection Equipment: Equipment Cleaned with Purge Water from Well

E. CONTAINERIZATION AND PRESERVATION

WATER QUALITY PARAMETER	PRESERVATION METHOD	CONTAINER TYPE/SIZE
General Mineral/Physical	(All Stored at 4°C)	1,000 ML Plastic
Total Metals	No Additives	500 ML Plastic
Nitrate/Nitrite	HNO3 to <2 pH*	50 ML Plastic
Phenols	H2SO4 to <2 pH*	100 ML Glass
	H3PO4 + CuSO4 Solution*	

Field Filtering: Yes (Yes, No, N/A)  
Filtering Apparatus: Pressure Disposable Filters  
Filter Mesh Size: 0.45 Micron  
Chain-of-Custody Procedures Followed: Yes X No \_\_\_\_\_

\*All bottles furnished by BC Laboratories Inc. with preservative added.

**GROUNDWATER SAMPLING PROCEDURES DOCUMENTATION FORM**  
(for inclusion with the Self-Monitoring Report Form)

Date

A. WELL IDENTIFIER (name, location, or number) CC-8 Sampled: 8-26-92

B. FIELD MEASUREMENTS

Depth to Water (prior to purging): 156.82 (feet below land surface)

Land Elevation at Well (feet above sea level): 3621.52 (M.P.)

Equipment Used to Measure Water Level: 500' Steel Chain (Wetted Tape Method)

Water Temp. (°C): 26.8 pH (std. units): 7.13 Other: \_\_\_\_\_

Electrical Conductivity (umhos/cm @ 25°C): 1820

C. SAMPLING METHODS

Well Purging Performed: Yes: X No: \_\_\_\_\_

Purging Equipment: Dedicated Pump

Purge Time (hrs.-min.): 29 min. Pumping Rate (gpm) 10

Sample Collection Equipment: \_\_\_\_\_ Well Volumes Removed: 3

\_\_\_\_\_ Bailer (type): \_\_\_\_\_

X Pump (type): Submersible Dedicated? Yes

\_\_\_\_\_ Other (type): \_\_\_\_\_

If a Pump was Used, at What Depth Below the Water Surface was the Pump Intake Set?: 143 Feet

Sample Collection Point (well head, water tank, etc.): Well Head

D. EQUIPMENT DECONTAMINATION

Briefly Describe Equipment Decontamination Procedures:

Water Level Measurement Equipment: Wiping with Disposable Towel

Purging Equipment: Dedicated Pump Placed on PVC Pump Column

Sample Collection Equipment: Equipment Cleaned with Purge Water

E. CONTAINERIZATION AND PRESERVATION

WATER QUALITY PARAMETER	PRESERVATION METHOD	CONTAINER TYPE/SIZE
<u>General Mineral/Physical</u>	<u>(All Stored at 4°C)</u>	<u>1,000 ML Plastic</u>
<u>Total Metals</u>	<u>No Additives</u>	<u>500 ML Plastic</u>
<u>Nitrate/Nitrite</u>	<u>HNO3 to &lt;2 pH*</u>	<u>50 ML Plastic</u>
<u>Phenols</u>	<u>H2SO4 to &lt;2 pH*</u>	<u>100 ML Glass</u>
	<u>H3PO4 + CuSO4 Solution*</u>	

Field Filtering: Yes (Yes, No, N/A)

Filtering Apparatus: Pressure Disposable Filters

Filter Mesh Size: 0.45 Micron

Chain-of-Custody Procedures Followed: Yes X No \_\_\_\_\_

\*All bottles furnished by BC Laboratories Inc. with preservative added.

**GROUNDWATER SAMPLING PROCEDURES DOCUMENTATION FORM**  
(for inclusion with the Self-Monitoring Report Form)

Date

A. WELL IDENTIFIER (name, location, or number) CC-14 Sampled: 8-26-92

B. FIELD MEASUREMENTS

Depth to Water (prior to purging): 144.58 (feet below land surface)  
Land Elevation at Well (feet above sea level): 3608.39 (M.P.)  
Equipment Used to Measure Water Level: 500' Steel Chain (Wetted Tape Method)  
Water Temp. (°C): 23.9 pH (std. units): 6.97 Other: \_\_\_\_\_  
Electrical Conductivity (umhos/cm @ 25°C): 1860

C. SAMPLING METHODS

Well Purging Performed: Yes: X No: \_\_\_\_\_

Purging Equipment: Dedicated Pump

Purge Time (hrs.-min.): 20 min Pumping Rate (gpm) 10

Sample Collection Equipment: \_\_\_\_\_ Well Volumes Removed: 3

\_\_\_\_\_ Bailer (type): \_\_\_\_\_

X Pump (type): Submersible Dedicated? Yes

\_\_\_\_\_ Other (type): \_\_\_\_\_

If a Pump was Used, at What Depth Below the Water Surface was the Pump Intake Set?: 143 Feet

Sample Collection Point (well head, water tank, etc.): Well Head

D. EQUIPMENT DECONTAMINATION

Briefly Describe Equipment Decontamination Procedures:

Water Level Measurement Equipment: Wiping with Disposable Towel

Purging Equipment: Dedicated Pump on PV Column

Sample Collection Equipment: Equipment Cleaned with Purge Water from Well

E. CONTAINERIZATION AND PRESERVATION

WATER QUALITY PARAMETER	PRESERVATION METHOD	CONTAINER TYPE/SIZE
General Mineral/Physical	(All Stored at 4°C)	1,000 ML Plastic
Total Metals	No Additives	500 ML Plastic
Nitrate/Nitrite	HNO3 to <2 pH*	50 ML Plastic
Phenols	H2SO4 to <2 pH*	100 ML Glass
	H3PO4 + CuSO4 Solution*	

Field Filtering: Yes (Yes, No, N/A)

Filtering Apparatus: Pressure Disposable Filters

Filter Mesh Size: 0.45 Micron

Chain-of-Custody Procedures Followed: Yes X No \_\_\_\_\_

\*All bottles furnished by BC Laboratories Inc. with preservative added.

**GROUNDWATER SAMPLING PROCEDURES DOCUMENTATION FORM**  
(for inclusion with the Self-Monitoring Report Form)

A. WELL IDENTIFIER (name, location, or number) CC-7 Date 9-1-92  
B. FIELD MEASUREMENTS  
Depth to Water (prior to purging): 119.22 (feet below land surface)  
Land Elevation at Well (feet above sea level): 3561.61 (M.P.)  
Equipment Used to Measure Water Level: 500' Steel Chain (Wetted Tape Method)  
Water Temp. (°C): 22.2 pH (std. units): 6.86 Other: \_\_\_\_\_  
Electrical Conductivity (umhos/cm @ 25°C): 1,980

C. SAMPLING METHODS

Well Purging Performed: Yes: X No: \_\_\_\_\_  
Purging Equipment: Dedicated Pump  
Purge Time (hrs.-min.): 20 min Pumping Rate (gpm) 12  
Sample Collection Equipment: \_\_\_\_\_ Well Volumes Removed: 3  
    Bailer (type): \_\_\_\_\_  
    X Pump (type): Submersible Dedicated? Yes  
    Other (type): \_\_\_\_\_  
If a Pump was Used, at What Depth Below the Water Surface was the Pump Intake Set?: 120 Feet  
Sample Collection Point (well head, water tank, etc.): Well Head

D. EQUIPMENT DECONTAMINATION

Briefly Describe Equipment Decontamination Procedures:  
Water Level Measurement Equipment: Wiping with Disposable Towel  
Purging Equipment: Dedicated Pump  
Sample Collection Equipment: Equipment Cleaned with Purge Water

E. CONTAINERIZATION AND PRESERVATION

WATER QUALITY PARAMETER	PRESERVATION METHOD	CONTAINER TYPE/SIZE
General Mineral/Physical	(All Stored at 4°C) No Additives	1,000 ML Plastic
Total Metals	HNO3 to <2 pH*	500 ML Plastic
Nitrate/Nitrite	H2SO4 to <2 pH*	50 ML Plastic
Phenols	H3PO4 + CuSO4 Solution*	100 ML Glass

Field Filtering: Yes (Yes, No, N/A)  
Filtering Apparatus: Pressure Disposable Filters  
Filter Mesh Size: 0.45 Micron  
Chain-of-Custody Procedures Followed: Yes X No \_\_\_\_\_

\*All bottles furnished by BC Laboratories Inc. with preservative added.

**GROUNDWATER SAMPLING PROCEDURES DOCUMENTATION FORM**  
(for inclusion with the Self-Monitoring Report Form)

A. WELL IDENTIFIER (name, location, or number) CC-8 Date 9-1-92 Sampled: 9-1-92

B. FIELD MEASUREMENTS

Depth to Water (prior to purging): 157.04 (feet below land surface)  
Land Elevation at Well (feet above sea level): 3621.52 (M.P.)  
Equipment Used to Measure Water Level: 500' Steel Chain (Wetted Tape Method)  
Water Temp. (°C): 26.9 pH (std. units): 7.13 Other: \_\_\_\_\_  
Electrical Conductivity (umhos/cm @ 25°C): 1,820

C. SAMPLING METHODS

Well Purging Performed: Yes: X No: \_\_\_\_\_  
Purging Equipment: Dedicated Pump  
Purge Time (hrs.-min.): 28 min Pumping Rate (gpm) 10  
Sample Collection Equipment: \_\_\_\_\_ Well Volumes Removed: 3  
\_\_\_\_ Bailer (type): \_\_\_\_\_  
X Pump (type): Submersible Dedicated? Yes  
\_\_\_\_ Other (type): \_\_\_\_\_  
If a Pump was Used, at What Depth Below the Water Surface was the Pump Intake Set?: 143 Feet  
Sample Collection Point (well head, water tank, etc.): Well Head

D. EQUIPMENT DECONTAMINATION

Briefly Describe Equipment Decontamination Procedures:  
Water Level Measurement Equipment: Wiping with Disposable Towel  
Purging Equipment: Dedicated Pump Placed on PVC Pump Column  
Sample Collection Equipment: Equipment Cleaned with Purge Water

E. CONTAINERIZATION AND PRESERVATION

WATER QUALITY PARAMETER	PRESERVATION METHOD	CONTAINER TYPE/SIZE
General Mineral/Physical	(All Stored at 4°C)	1,000 ML Plastic
Total Metals	No Additives	500 ML Plastic
Nitrate/Nitrite	HNO3 to <2 pH*	50 ML Plastic
Phenols	H2SO4 to <2 pH*	100 ML Glass
	H3PO4 + CuSO4 Solution*	

Field Filtering: Yes (Yes, No, N/A)  
Filtering Apparatus: Pressure Disposable Filters  
Filter Mesh Size: 0.45 Micron  
Chain-of-Custody Procedures Followed: Yes X No \_\_\_\_\_

\*All bottles furnished by BC Laboratories Inc. with preservative added.

**GROUNDWATER SAMPLING PROCEDURES DOCUMENTATION FORM**  
(for inclusion with the Self-Monitoring Report Form)

A. WELL IDENTIFIER (name, location, or number) CC-14 Date 9-1-92 Sampled: 9-1-92

B. FIELD MEASUREMENTS

Depth to Water (prior to purging): 144.85 (feet below land surface)  
Land Elevation at Well (feet above sea level): 3608.39 (M.P.)  
Equipment Used to Measure Water Level: 500' Steel Chain (Wetted Tape Method)  
Water Temp. (°C): 23.8 pH (std. units): 6.97 Other: \_\_\_\_\_  
Electrical Conductivity (umhos/cm @ 25°C): 1,840

C. SAMPLING METHODS

Well Purging Performed: Yes: X No: \_\_\_\_\_  
Purging Equipment: Dedicated Pump  
Purge Time (hrs.-min.): 19 min. Pumping Rate (gpm) 10  
Sample Collection Equipment: \_\_\_\_\_ Well Volumes Removed: 3  
    Bailer (type): \_\_\_\_\_  
    X Pump (type): Submersible Dedicated? Yes  
    Other (type): \_\_\_\_\_  
If a Pump was Used, at What Depth Below the Water Surface was the Pump Intake Set?: 143 Feet  
Sample Collection Point (well head, water tank, etc.): Well Head

D. EQUIPMENT DECONTAMINATION

Briefly Describe Equipment Decontamination Procedures:  
Water Level Measurement Equipment: Wiping with Disposable Towel  
Purging Equipment: Dedicated Pump on PV Column  
Sample Collection Equipment: Equipment Cleaned with Purge Water from Well

E. CONTAINERIZATION AND PRESERVATION

WATER QUALITY PARAMETER	PRESERVATION METHOD	CONTAINER TYPE/SIZE
General Mineral/Physical	(All Stored at 4°C)	1,000 ML Plastic
Total Metals	No Additives	500 ML Plastic
Nitrate/Nitrite	HNO3 to <2 pH*	50 ML Plastic
Phenols	H2SO4 to <2 pH*	100 ML Glass
	H3PO4 + CuSO4 Solution*	

Field Filtering: Yes (Yes, No, N/A)  
Filtering Apparatus: Pressure Disposable Filters  
Filter Mesh Size: 0.45 Micron  
Chain-of-Custody Procedures Followed: Yes X No \_\_\_\_\_

\*All bottles furnished by BC Laboratories Inc. with preservative added.